**Physical Science Lesson**

South Philadelphia HS

Ms. Millington-Room 300

**Objective:**

Today we will demonstrate understanding of the structure and measurable properties of atoms and sub-atoms.

You will know you have learned this when you can create an illustrated comic of the atomic structure of an element inclusive of classification and identified properties.

**Standard Addressed:**

* Know that atoms are composed of even smaller sub-atomic structure whose properties are measureable. (3.4.10.A.1)

**21st Century Skills Addressed:**

* Creativity & Innovation
* Communication and Collaboration

**Project Goals:**

Work with a partner to identify a chemical element that you will research from the Periodic Table of Elements. Use the attached worksheet to record the following information about the element you have chosen:

1. Name/Symbol of Element
2. Atomic Number & Mass
3. Name of Element Family
4. Classification of Element (Metal, Nonmetal, Metalloid)
5. Electron Configuration (Bohr Model)
6. Number of Neutrons, Protons, Electrons
7. Inventor Surname
8. Date of Discovery
9. Melting & Boiling Point
10. Two Potential Uses

Create a one-page comic strip that includes the ten components for your element. A sample template is attached to this document. You may design your own layout if you choose. Use the links below for information about elements & images for your comic strip. Capture photos of yourself in either Comic Life or Photo Booth to be the stars of your own comic strip.

**Internet Links:**

<http://webelements.com/>

<http://ptable.com/>

<http://www.lenntech.com/periodic/periodic-chart.htm>

<http://www.chemicool.com/>

<http://www.periodictable.com/>

<http://chemistry.about.com/od/periodictableelements/l/blperiodictableelementphotos.htm>

<http://www.chemicalelements.com/>

Use this site for assistance with using Photo Booth with Comic Life:

<http://www2.yisd.net/education/components/whatsnew/default.php?sectiondetailid=81254>

**Assessment:**

You will be given two class periods to complete this assignment. View the attached grading rubric and use it as a self-assessment tool. Be creative by using humor and imagination in your comic. Document the sources of your information; including graphics, in a separate document entitled “Works Cited” using MLA (Modern Language Association) Format.

Use the link below for assistance in formatting and creating a Bibliography (Works Cited): <http://owl.english.purdue.edu/owl/resource/614/01/>

Use the online tool found at the link below to create the Work Cited Page: <http://www.easybib.com>.

**Chemical Elements Assignment**

**Grading Rubric**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Category** | **4** | **3** | **2** | **1** | **Total** |
| **Content**  **30% of Total** | Comic demonstrates mastery of chemical compound. All ten required components present in the comic. | Comic demonstrates understanding of assigned chemical compound. At least seven required components are present in the comic. | Comic demonstrates some understanding of assigned chemical compound. At least five of the required components are present in the comic. | Comic demonstrates minimal understanding of assigned chemical compound. Few of the assigned components are present in the comic. |  |
| **Creativity**  **30% of Total** | Comic demonstrates a high level of creativity and imagination in the usage of application features, text, graphics and/or Photo Booth. | Comic demonstrates creativity and imagination in the usage of application features, text, graphics and/or Photo Booth. | Comic demonstrates some creativity and imagination in the usage of application features, text, graphics and/or Photo Booth. | Comic demonstrates minimal creativity and imagination in the usage of application features, text, graphics and/or Photo Booth. |  |
| **Readability**  **20% of Total** | Comic is consistently readable and understandable. Layout is clear and lettering in word balloons is neat and legible. | Comic is usually readable and understandable. Layout is adequate and lettering in word balloons is adequate. | Comic is sometimes illegible. Layout is inconsistent and lettering in word balloons is unclear at times. | Comic is illegible. Layout is unclear and word balloons are difficult to read. |  |
| **Writing & Layout**  **10% of Total** | No misspelled words or grammatical errors. | Only one or two misspelled words or grammatical errors. | A few misspelled words or grammatical errors. | Many misspelled words and/or grammatical errors. |  |
| **Copyright**  **10% of Total** | All text and graphics sources are properly documented in a Works Cited page. | Some documentation of text and graphics sources is present in a Works Cited page. | There is little documentation of text of graphics cited for sources of information or the citation is unclear. | There is no documentation of text or graphics cited for sources of information. |  |

**Total Points:**

Student Name(s): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_